



Glenn Research Center



View of the Future — Environmental Concerns

- ◆ **Soot is a critical element of combustion systems, affecting combustor lifetime, efficiency, peak power output, and pollution generation.**
 - The flow environment for soot kinetics in laminar flames is strongly affected by gravity level.
 - Microgravity offers a unique opportunity to control the flow.
- ◆ **By removing unwanted buoyant convection, mechanisms leading to soot formation, aggregation, and oxidation studied in a planned, scientific fashion.**
 - Trial and error approach to soot formation and control will be replaced by predictive / control technology.